

1917

U. S. DEPARTMENT OF AGRICULTURE  
WEATHER BUREAU

CHARLES F. MARVIN, Chief.

ANNUAL  
METEOROLOGICAL  
SUMMARY

WITH COMPARATIVE DATA  
OF

San Francisco, Cal.

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BY  
E. A. BEALS  
DISTRICT FORECASTER

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SAN FRANCISCO, CAL.  
WEATHER BUREAU OFFICE  
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# ANNUAL METEOROLOGICAL SUMMARY.

SAN FRANCISCO, CAL., YEAR 1917.

MONTH.	TEMPERATURE. (Degrees Fahrenheit.)							(per- cent).	PRECIPITATION. (In. and hundredths)				Percentage of sunshine.	WIND.				NUMBER OF DAYS WITH--												
	MEAN.			EXTREMES.					Total.	Maximum in 24 hrs.	Date.	Snowfall.		Average hourly velocity.	Prevailing direc- tion.	MAXIMUM (For 5 Minutes)			Gales (40 miles per hour or over).	Clear.	Partly cloudy.	Cloudy.	Precipitation (0.01 inch or over).	Thunderstorms.	Fog, dense.	Snow (0.1 in or over)	MAX. TEMP.		MIN. TEMP.	
	Maximum.	Minimum.	Monthly.	Maximum.	Date.	Minimum.	Date.									Velocity.	Direction.	Date.									82° or below.	90° or above.	82° or below.	Zero or below
January.....	54.8	40.8	47.6	63	25	34	16	70	1.83	1.02	1-2	0	71	6.5	NE	33	NE	15	0	21	0	10	8	0	5	0	0	0	0	0
February.....	59.3	44.6	52.0	73	15	37	1	74	3.81	1.36	20-21	0	60	8.7	SW	52	S	24	2	14	6	8	11	0	1	0	0	0	0	0
March.....	59.1	44.3	51.7	72	26	41	11	68	1.42	0.68	8-9	0	81	7.6	SW	33	SW	8	0	24	6	1	4	0	1	0	0	0	0	0
April.....	62.2	48.0	55.1	76	4	43	16	75	0.33	0.25	11	0	84	9.0	SW	37	SW	11	0	26	3	2	5	0	0	0	0	0	0	0
May.....	59.7	48.3	54.0	69	5	46	14	78	0.06	0.02	17	0	75	11.3	SW	37	SW	8	0	20	3	3	4	0	0	0	0	0	0	0
June.....	67.4	49.8	58.6	87	15	46	8	74	T.	T.	6	0	90	11.5	SW	34	SW	9	0	26	3	1	0	0	1	0	0	0	0	0
July.....	67.5	52.1	59.8	88	21	49	3	80	T.	T.	31	0	80	12.5	SW	37	SW	11	0	21	10	0	0	0	0	0	0	0	0	0
August.....	62.9	52.4	57.6	69	20	50	5	85	T.	T.	16-17	0	46	11.7	SW	36	SW	10	0	7	14	10	0	0	0	0	0	0	0	0
September.....	72.5	55.5	64.0	94	15	49	20	74	0.02	0.02	22	0	70	8.4	SW	34	SW	18	0	19	7	4	1	0	3	0	0	0	0	0
October.....	71.0	53.6	62.3	96	8	49	24	72	0.00	0.00	0	0	57	7.1	SW	33	SW	7	0	13	11	7	0	0	4	0	0	1	0	0
November.....	65.4	52.0	53.7	72	20	48	27	74	0.81	0.40	30	0	53	5.5	N	31	SW	30	0	13	6	11	6	0	2	0	0	0	0	0
December.....	60.6	48.6	54.6	68	12	43	22	77	0.72	0.67	25-26	0	67	5.5	N	24	SE	25	0	17	9	5	3	0	8	0	0	0	0	0
Year.....	63.5	49.2	56.3	96	Oct. 3	34	Jan. 16	75.2	9.00	1.36	Feb. 20-21	0	70	8.8	SW	52	S	Feb. 24	2	221	82	62	42	0	25	0	0	3	0	0

### GENERAL SUMMARY.

The year 1917 was relatively warm and dry at San Francisco. The mean temperature, 56.3°, was 1.4° above the normal, while the total rainfall, 9.00 inches, was 13.27 inches, or 60 per cent, below the normal. It was the driest year in the 68 years of record. During the half-year from May to October, inclusive, but 0.08 inch of rain fell, this being less than 1 per cent of the total precipitation for the year. No severe storms or destructive winds occurred during the year, and not a single thunderstorm was recorded. No snow fell, and no frost occurred after March 31. Light hail fell on February 25. The spring months were relatively cold, the summer months were about normal in temperature, while the autumn months were abnormally warm and dry. October was the warmest and driest month of that name in 17 years, while the maximum temperature of 96°, recorded on the 3d, is the highest which has occurred at this station during a month of October in 47 years of record. More than the usual amount of sunshine was received during the year, while the wind movement was somewhat below normal. The weather of the year as a whole was generally favorable, and as far as personal comfort was concerned it was a pleasant year. A. H. P.

### MISCELLANEOUS DATA FOR 1917.

#### Barometric Pressure (sea level).

Mean, 30.06 inches; highest, 30.53 inches, March 3; lowest, 29.55 inches, February 24.

#### Temperature.

Greatest daily range, 40°; from 87° to 47°, on June 15. Least daily range, 5°; from 45° to 40°, on January 14.

Greatest monthly range, 47°, in October. Least monthly range, 19°, in August.

Highest mean of three consecutive days, 75°, September 26-28.

Lowest mean of three consecutive days, 41°, January 15-17.

#### Precipitation.

Longest period without precipitation, 54 days, June 7 to July 30, inclusive.

Longest period with precipitation, 4 days, February 23 to 26, inclusive.

Hail: February 25.

#### Other Miscellaneous Data.

Last frost in spring, March 31.

No frost during autumn.

Killing frost, January 16, 17, 18.

### Summarized Climatic Data.

#### TEMPERATURE. (Degrees Fahrenheit.)

At San Francisco the monthly mean temperature of the air is:

January	-	-	-	-	-	49.5°
February	-	-	-	-	-	51.3°
March	-	-	-	-	-	52.7°
April	-	-	-	-	-	53.7°
May	-	-	-	-	-	55.5°
June	-	-	-	-	-	57.0°
July	-	-	-	-	-	57.3°
August	-	-	-	-	-	58.0°
September	-	-	-	-	-	59.3°
October	-	-	-	-	-	58.4°
November	-	-	-	-	-	55.5°
December	-	-	-	-	-	50.9°
The annual mean temperature	-	-	-	-	-	54.9°

The mean diurnal range of temperature is as follows:

January	-	-	-	-	-	9.8°
February	-	-	-	-	-	11.0°
March	-	-	-	-	-	11.6°
April	-	-	-	-	-	12.9°
May	-	-	-	-	-	12.2°
June	-	-	-	-	-	13.3°
July	-	-	-	-	-	12.2°
August	-	-	-	-	-	11.3°
September	-	-	-	-	-	13.1°
October	-	-	-	-	-	13.6°
November	-	-	-	-	-	11.4°
December	-	-	-	-	-	9.8°
Annual	-	-	-	-	-	11.8°

The greatest diurnal range was 24° in January; February, 26°; March, 31°; April, 33°; May, 35°; June, 43°; July, 32°; August, 38°; September, 41°; October, 35°; November, 26°; December, 22°.

The greatest diurnal range for the period 1871 to 1917 was 43°. This occurred on June 29, 1891, the extremes being 100° and 57°.

The absolute highest temperature at San Francisco since 1871 was 101°, which occurred on September 16, 1913. The absolute lowest, 29°, occurred on January 18, 1888.

The mean variability of the temperature, as expressed by differences of consecutive daily means, based upon six years' records, 1906-1911, is: January, 2.0°; February, 1.8°; March, 2.7°; April, 3.2°; May, 2.4°; June, 2.4°; July, 2.1°; August, 2.0°; September, 2.9°; October, 3.5°; November, 2.3°; December, 2.0°; annual, 2.5°.

#### FROSTS.

Light frosts occasionally occur on winter mornings when the temperature near the ground is as low as or lower than 32°; but during the last 29 years there has been no date when the minimum temperature of the air, as officially recorded, fell as low as 32°. Records of temperatures near the ground are obtained from a kiosk in Union Square Park. The range of the temperature near the ground is somewhat greater than that of the shelter on the roof. The afternoon temperature is, as a rule, 2° or 3° higher, and the early morning temperature 3° or 4° lower than the official figures.

#### PRECIPITATION.

The heaviest precipitation in 24 hours occurred between 11:08 p. m. Jan. 28 and 11:08 p. m. Jan. 29, 1881, amounting to 4.67 inches. The next greatest 24-hour rainfall was 3.98 inches on Nov. 22-23, 1874. The heaviest hourly rainfall occurred on Sept. 23, 1904, when 0.97 of an inch fell. In two hours 1.29 inches fell, and in 16 hours and 15 minutes, 3.58 inches fell.

Number of days having 0.01 of an inch of precipitation: January, 11; February, 10; March, 11; April, 6; May, 4; June, 1; July, 0; August, 0; September, 2; October, 4; November, 7; December, 11; for the year, 67. These are the mean values for the period 1850-1911.

The percentage of rainy days in each month or the probability

of rainy days is: January, 35 per cent; February, 36; March, 35; April, 20; May, 13; June, 3; July, 0; August, 0; September, 7; October, 13; November, 23; December, 35; for the year, 18.

Snow rarely falls in San Francisco. In a period of 47 years, 1871-1917, snow has fallen 17 times. The greatest depth was 3.5 inches on Dec. 31, 1882. Snow seldom lasts more than a few hours. The date of earliest snowfall was December 31, that of the latest snowfall, March 31.

Thunderstorms are rare. Within a period of 25 years, 38 have been reported, of which 8 occurred in one year. The storms are of short duration and of feeble intensity. The month of maximum frequency is December.

Hailstorms are infrequent. In a period of 25 years, 65 storms occurred; 51 of these were in December, January, February and March. There is no record of a hailstorm occurring in June, July, August or September.

#### WINDS.

Monthly mean wind velocities based on records from 1872 to 1911, are: January, 5,282 miles; February, 4,990; March, 6,563; April, 7,260; May, 8,416; June, 9,118; July, 9,494; August, 9,047; September, 7,156; October, 5,792; November, 4,649; December, 4,952; annual, 82,704.

In January the wind is south from midnight until noon, veering to northeast at 1 p. m. and becoming northwest after 3 p. m. In February the same change can be noted except northeast winds begin earlier. During the summer and fall the winds are steadily west. In November a southerly component is noticeable, changing to northeast and northwest during the day. The north and northeast winds in general are followed by higher temperature in summer and lower temperature in winter. East, southeast and south winds are followed by increasing cloudiness, increasing moisture and sometimes rain. The southwest winds are marked by moderate temperature, much cloudiness or fog and occasional rain. West and northwest winds result in lower temperature, some fog, but in general little rain.

#### EXTREMES OF PRECIPITATION AND WIND.

Jan. 1, 1871 to Dec. 31, 1917.

MONTH.	PRECIPITATION.			WIND.			
	24-hr. max.	Year.	Day.	Max. vel.	Direction.	Year.	Day.
January.....	4.67	1881	25-29	57.	se.	1901	3
February.....	3.60	1887	4-5	52	s.	1917	24
March.....	3.31	1879	5-6	60	s.	1902	1
April.....	2.43	1886	23-24	47	nw.	1871	23
May.....	1.42	1906	27-28	45	w.	1897	11
June.....	1.23	1884	12-13	48	sw.	1873	.....
July.....	0.23	1886	16	41	w.	1898	15
August.....	0.22	1916	13-14	42	sw.	1893	2
September.....	3.68	1904	23-24	40	w.	1899	27
October.....	2.03	1889	17-18	44	ne.	1906	20
November.....	3.98	1874	22-23	64	ne.	1906	30
December.....	3.40	1915	2-3	60	se.	1892	23

## COMPARATIVE DATA.

## Monthly and Annual Mean Temperatures.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	An'l.
1871.....	52.2	54.2	54.3	53.3	54.3	56.9	56.6	57.9	60.4	61.8	55.1	52.9	56.2
1872.....	54.8	50.9	54.5	54.6	55.4	57.1	58.1	59.5	58.3	59.7	57.7	50.7	55.9
1873.....	49.3	51.2	50.9	54.9	57.6	59.1	57.8	59.0	61.4	59.8	56.1	50.3	55.6
1874.....	49.0	52.0	51.8	55.4	57.2	59.4	58.8	58.8	59.2	62.0	57.4	51.4	56.0
1875.....	48.8	52.8	53.2	55.4	56.8	61.4	59.1	59.6	61.5	59.9	58.0	53.0	56.6
1876.....	54.3	55.8	57.2	54.4	56.2	62.0	60.8	59.8	62.5	59.2	57.2	52.7	57.7
1877.....	52.8	53.3	55.9	56.0	58.0	58.8	58.6	59.1	60.2	61.6	57.1	51.6	56.9
1878.....	48.0	48.8	49.4	53.3	57.7	57.2	58.8	59.1	58.9	59.8	54.2	53.2	54.9
1879.....	54.0	55.3	54.4	57.9	58.0	58.6	59.7	58.8	59.7	56.6	55.1	51.0	56.6
1880.....	49.4	48.8	53.4	53.0	57.0	57.9	59.5	58.6	59.8	58.8	53.2	52.8	55.2
1881.....	47.0	48.8	54.0	53.2	58.0	61.4	59.8	59.2	63.1	57.9	54.1	50.8	55.6
1882.....	50.6	50.8	54.5	56.0	59.4	60.2	61.4	60.0	59.6	58.2	57.4	52.8	56.7
1883.....	51.1	53.3	57.7	58.2	58.1	57.8	61.6	59.6	61.8	60.7	57.8	54.0	57.8
1884.....	51.2	56.8	53.6	56.4	59.1	59.4	60.3	60.6	62.4	58.6	56.8	53.6	57.3
1885.....	52.6	47.8	55.8	55.8	57.0	59.4	56.6	57.8	62.0	64.2	56.4	52.2	56.5
1886.....	46.7	53.9	53.4	57.8	56.9	62.4	61.4	60.8	62.6	61.6	57.0	53.2	57.3
1887.....	50.4	54.0	57.2	58.8	58.8	60.2	58.8	60.4	64.6	61.8	58.6	51.3	57.9
1888.....	46.2	49.1	53.8	54.8	59.8	59.2	59.8	61.4	60.4	62.4	59.0	49.8	56.3
1889.....	52.2	51.2	55.0	53.4	55.7	60.2	59.4	61.8	61.8	59.7	58.6	49.6	56.6
1890.....	51.7	52.4	54.2	53.1	58.0	56.8	58.1	59.4	60.2	59.6	56.9	51.1	56.0
1891.....	47.4	50.3	51.2	52.4	55.8	56.5	56.6	56.6	59.3	57.6	55.6	52.4	54.3
1892.....	47.7	48.4	50.6	55.2	55.4	55.9	56.4	59.2	63.4	59.6	59.4	49.7	55.1
1893.....	48.6	53.8	52.2	54.8	57.6	58.7	58.4	58.4	60.7	58.8	56.2	48.6	55.6
1894.....	52.2	55.3	54.3	51.6	56.3	57.2	59.4	59.5	59.6	58.8	53.4	52.8	55.9
1895.....	48.6	50.7	48.9	57.4	57.4	58.9	58.2	57.4	60.8	58.4	53.1	50.7	55.0
1896.....	46.7	52.6	51.2	54.4	52.6	59.0	56.2	57.0	59.0	61.2	55.4	49.7	54.6
1897.....	53.0	51.6	52.2	54.6	52.6	56.9	55.9	58.3	58.2	59.3	56.8	49.6	54.9
1898.....	50.7	53.6	55.2	54.0	57.0	57.6	58.2	59.7	63.3	58.8	56.3	50.2	56.2
1899.....	49.8	52.2	55.8	51.8	53.9	56.7	55.6	56.4	58.5	61.8	57.2	52.9	55.2
1900.....	46.7	52.9	51.6	54.4	55.5	56.9	59.2	60.6	61.9	59.3	54.8	50.6	55.4
1901.....	47.9	48.9	52.2	54.0	55.2	58.5	57.2	57.6	61.0	62.0	56.0	52.4	55.3
1902.....	50.6	50.8	51.8	56.8	59.0	59.2	57.1	57.1	64.0	62.0	58.0	50.6	56.4
1903.....	51.3	54.0	57.0	56.4	55.5	56.0	59.5	58.4	60.4	60.4	56.2	50.7	56.3
1904.....	51.6	55.2	54.0	56.4	56.2	59.4	57.6	57.9	60.0	61.7	55.4	49.6	56.2
1905.....	47.1	54.9	51.0	56.8	56.4	57.1	58.0	59.3	60.6	60.6	57.8	52.4	56.0
1906.....	50.8	50.9	54.8	56.4	55.4	55.4	57.3	57.4	60.5	58.8	55.4	47.0	55.0
1907.....	51.5	51.3	51.8	56.6	54.5	56.1	57.8	57.4	61.6	59.4	54.8	49.2	55.2
1908.....	46.4	50.4	54.9	57.1	58.7	55.9	56.4	56.5	57.6	61.2	54.8	53.0	55.2
1909.....	51.0	49.3	49.2	53.6	55.6	55.0	56.4	56.5	60.0	60.9	57.3	51.7	55.2
1910.....	51.8	54.6	52.4	52.8	57.2	60.4	57.9	59.9	63.4	60.0	56.6	51.6	56.6
1911.....	47.4	52.4	52.6	55.4	56.6	58.2	60.6	62.1	64.6	61.5	55.2	50.6	56.4
1912.....	51.5	54.0	58.4	58.2	56.2	56.6	57.0	58.2	60.8	62.0	59.0	48.7	56.7
1913.....	50.8	52.8	57.9	57.1	57.6	58.9	60.2	61.3	62.4	61.3	56.1	52.1	57.4
1914.....	47.0	55.8	56.6	57.6	55.8	57.4	60.0	58.6	62.2	56.9	54.4	48.9	55.9
1915.....	47.6	52.0	51.7	55.1	54.0	58.6	59.8	57.6	64.0	62.3	58.7	54.6	56.3
Means.....	49.9	52.3	53.7	55.2	56.6	58.3	58.5	58.9	61.0	60.2	56.4	51.3	56.1

## TEMPERATURE EXTREMES.

Mar. 1, 1871 to Dec. 31, 1917.

MONTH.	Maxi- mum.	Year.	Day.	Mini- mum.	Year.	Day.
January.....	78	1899	26	29	1888	15
February.....	80	1899	18	33	1887	5
March.....	86	1914	18	33	1896	3
April.....	88	1888	14	40	1891	7
May.....	97	1887	28	42	1906	16
June.....	100	1891	29	46	1908	4
July.....	98	1905	7	47	1893	31
August.....	92	1891	22	46	1903	8
September.....	101	'04 '13	8, 16	47	1900	30
October.....	96	1917	3	45	1881	14
November.....	83	1895	16	38	1896	27
December.....	72	1893	8	34	1879	24

# SAN FRANCISCO RAINFALL.

Monthly, Seasonal and Annual, 1849-1917.

Season.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	Seasonal.	Year.	Annual.
1849-50..	0.00	0.00	0.00	3.14	8.66	6.20	8.34	1.77	4.53	0.46	0.00	0.00	33.10	1850	17.40
1850-51..	0.00	0.00	0.33	0.00	0.92	1.05	0.72	0.54	1.94	1.23	0.57	0.02	7.42	1851	15.60
1851-52..	0.00	0.02	1.03	0.21	2.12	7.10	0.58	0.14	6.68	0.26	0.32	0.00	18.46	1852	27.29
1852-53..	0.00	0.00	0.00	0.80	5.31	13.20	3.92	1.42	4.86	5.37	0.38	0.00	35.26	1853	21.17
1853-54..	0.00	0.04	0.46	0.12	2.28	2.32	3.88	8.04	3.51	3.12	0.02	0.08	23.87	1854	22.45
1854-55..	0.00	0.01	0.15	2.43	0.34	0.87	3.67	4.77	4.64	4.99	1.88	0.00	23.75	1855	26.38
1855-56..	0.00	0.00	0.00	0.00	0.67	5.76	9.40	0.50	1.60	2.94	0.70	0.03	21.66	1856	22.31
1856-57..	0.02	0.00	0.07	0.45	2.79	3.75	2.45	8.59	1.62	0.00	0.05	0.12	19.91	1857	20.96
1857-58..	0.00	0.05	0.00	0.93	3.01	4.14	4.36	1.83	5.55	1.55	0.34	0.05	21.81	1858	23.46
1858-59..	0.05	0.16	0.00	2.74	0.69	6.14	1.23	6.32	3.02	0.27	1.55	0.00	22.22	1859	21.39
1859-60..	0.00	0.02	0.03	0.05	7.28	1.57	1.64	1.60	3.99	3.14	2.86	0.09	22.27	1860	21.18
1860-61..	0.21	0.00	0.00	0.91	0.58	6.16	2.47	3.72	4.08	0.51	1.00	0.08	19.72	1861	25.52
1861-62..	0.00	0.00	0.02	0.00	4.10	9.54	24.36	7.53	2.20	0.73	0.74	0.05	49.27	1862	38.63
1862-63..	0.00	0.00	0.00	0.52	0.15	2.35	3.63	3.19	2.06	1.61	0.23	0.00	13.74	1863	15.10
1863-64..	0.00	0.00	0.03	0.00	2.55	1.86	1.83	0.00	1.52	1.57	0.78	0.00	10.08	1864	21.64
1864-65..	0.00	0.21	0.01	0.13	6.68	8.91	5.14	1.34	0.74	0.94	0.63	0.00	24.73	1865	14.06
1865-66..	0.00	0.00	0.24	0.26	4.19	0.58	10.88	2.12	3.04	0.12	1.46	0.04	22.93	1866	36.28
1866-67..	0.00	0.00	0.11	0.00	3.35	15.15	5.16	5.20	1.58	2.36	0.00	0.00	32.92	1867	28.64
1867-68..	0.00	0.00	0.04	0.20	3.41	10.69	9.50	6.13	6.30	2.31	0.03	0.23	38.84	1868	30.17
1868-69..	0.00	0.00	0.00	0.15	1.18	4.34	6.35	3.90	3.14	2.19	0.08	0.02	21.35	1869	22.59
1869-70..	0.00	0.00	0.12	1.29	1.19	4.31	3.89	4.78	2.00	1.53	0.20	0.00	19.31	1870	16.24
1870-71..	0.00	0.00	0.03	0.00	0.43	3.38	3.07	8.76	1.31	1.89	0.23	0.01	14.11	1871	27.53
1871-72..	0.00	0.02	0.00	0.07	2.81	14.36	4.03	6.90	1.59	0.81	0.18	0.04	30.78	1872	22.42
1872-73..	0.01	0.00	0.04	0.11	2.79	5.95	1.58	3.94	0.79	0.43	0.00	0.02	15.66	1873	18.56
1873-74..	0.01	0.08	0.00	0.83	1.16	9.72	5.66	2.21	3.36	0.90	0.66	0.14	24.73	1874	22.52
1874-75..	0.00	0.00	0.02	2.69	6.55	0.33	8.01	0.32	1.30	0.10	0.22	1.02	20.56	1875	22.63
1875-76..	0.00	0.00	0.00	0.24	7.27	4.15	7.55	4.92	5.49	1.29	0.24	0.04	31.19	1876	23.54
1876-77..	0.01	0.01	0.38	3.36	0.25	0.00	4.32	1.18	1.08	0.26	0.18	0.01	11.04	1877	11.93
1877-78..	0.02	0.00	0.00	0.65	1.57	2.66	11.97	12.52	4.56	1.06	0.16	0.01	35.18	1878	33.26
1878-79..	0.01	T.	0.55	1.27	0.57	0.58	3.52	4.90	8.75	1.89	2.35	0.05	24.44	1879	30.76
1879-80..	0.01	0.02	T.	0.78	4.03	4.46	2.23	1.87	2.08	10.06	1.12	0.00	26.66	1880	30.07
1880-81..	0.00	0.06	0.00	0.05	0.33	12.33	8.69	4.65	0.90	2.00	0.22	0.69	29.86	1881	23.73
1881-82..	0.00	0.00	0.25	0.54	1.94	3.85	1.68	2.96	3.45	1.22	0.21	0.04	16.14	1882	18.67
1882-83..	0.00	0.00	0.26	2.66	4.18	2.01	1.92	1.04	3.01	1.51	3.52	0.01	20.12	1883	15.43
1883-84..	0.00	0.00	0.42	1.48	1.60	0.92	3.94	6.65	8.24	6.33	0.23	2.57	32.38	1884	38.82
1884-85..	T.	0.04	0.33	2.55	0.26	7.68	2.53	0.30	1.01	3.17	0.04	0.19	18.10	1885	24.90
1885-86..	0.06	T.	0.11	0.72	11.78	4.99	7.42	0.24	2.07	5.28	0.37	0.01	33.05	1886	20.02
1886-87..	0.23	T.	0.01	1.48	0.84	2.07	1.90	9.24	0.84	2.30	0.06	0.07	19.04	1887	19.04
1887-88..	T.	0.01	0.29	T.	0.99	3.34	6.81	0.94	3.00	0.11	0.38	0.27	16.74	1888	23.03
1888-89..	0.01	0.01	0.38	0.13	3.99	5.80	1.28	0.72	7.78	0.96	2.17	0.03	23.86	1889	36.94
1889-90..	0.01	T.	T.	7.28	2.90	13.81	9.61	5.16	4.73	1.18	1.07	0.10	45.85	1890	25.43
1890-91..	0.02	0.00	0.31	0.00	0.00	3.25	0.98	7.26	1.98	2.44	1.25	0.11	17.68	1891	21.11
1891-92..	0.10	0.02	0.77	0.04	0.56	5.62	2.42	2.90	2.85	1.39	1.86	T.	18.53	1892	22.08
1892-93..	0.00	0.00	0.02	1.65	3.91	5.08	3.05	2.75	4.08	1.03	0.15	0.03	21.73	1893	17.91
1893-94..	0.02	0.00	0.21	0.16	4.18	2.25	5.99	2.69	0.60	0.50	1.31	0.56	18.47	1894	24.32
1894-95..	T.	0.00	1.05	1.73	0.88	9.01	6.99	2.31	1.89	1.24	0.60	0.09	25.70	1895	17.13
1895-96..	0.01	0.00	0.77	0.11	1.78	1.43	8.14	0.28	2.85	5.16	0.72	0.00	21.25	1896	28.25
1896-97..	0.04	0.09	0.52	1.55	4.56	4.34	2.26	4.41	4.56	0.27	0.61	0.22	23.43	1897	16.40
1897-98..	T.	T.	0.10	1.70	1.05	1.22	1.12	2.13	0.24	0.19	1.44	0.19	9.38	1898	9.31
1898-99..	0.00	T.	1.06	0.86	0.46	1.62	3.67	0.10	7.61	0.62	0.86	0.01	16.87	1899	23.23
1899-1900..	0.00	T.	0.00	3.92	3.79	2.65	4.11	0.64	1.91	1.08	0.32	0.35	18.41	1900	15.33
1900-01..	T.	T.	0.46	1.48	3.91	1.37	5.79	5.03	0.80	1.64	0.69	T.	21.17	1901	19.75
1901-02..	T.	T.	0.78	0.64	3.48	0.90	1.23	7.27	2.65	0.98	1.05	T.	18.98	1902	19.18
1902-03..	T.	T.	T.	1.70	1.98	2.32	3.73	1.76	6.23	0.56	T.	T.	18.28	1903	18.33
1903-04..	0.00	T.	T.	0.17	4.25	1.63	1.05	5.89	6.01	1.29	0.39	T.	20.59	1904	24.72
1904-05..	0.02	0.06	5.07	2.37	1.07	1.59	4.04	2.70	3.15	1.33	2.05	0.00	23.45	1905	16.24
1905-06..	0.00	T.	T.	T.	0.92	2.05	3.90	4.30	5.02	0.92	2.75	0.56	20.42	1906	26.34
1906-07..	0.08	0.11	0.18	0.03	1.59	6.90	4.41	3.02	8.42	0.11	0.04	1.28	26.17	1907	22.47
1907-08..	T.	0.02	0.11	1.36	0.04	3.66	4.88	5.39	0.90	0.22	0.76	0.01	17.35	1908	16.42
1908-09..	0.02	0.01	0.13	0.61	1.34	2.15	10.51	7.53	3.27	T.	T.	T.	25.57	1909	31.36
1909-10..	0.00	0.00	0.80	1.23	2.43	5.59	3.24	2.09	3.78	0.31	2.03	0.02	19.52	1910	12.83
1910-11..	T.	0.00	0.05	0.65	0.48	1.73	13.79	3.02	4.57	0.89	0.23	0.03	25.49	1911	26.00
1911-12..	T.	0.00	T.	0.28	0.60	2.54	2.47	0.41	4.10	1.38	1.47	0.81	14.06	1912	15.62
1912-13..	T.	0.00	1.25	0.49	1.94	1.30	3.84	0.43	1.47	0.60	0.63	0.02	11.97	1913	19.05
1913-14..	0.07	0.01	0.00	0.35	6.22	5.41	9.76	5.04	1.09	0.99	0.37	0.29	29.60	1914	24.04
1914-15..	0.02	0.00	T.	0.29	0.70	5.49	6.74	7.36	3.02	0.62	3.17	0.00	27.41	1915	28.27
1915-16..	0.01	0.00	0.00	0.01	0.92	6.42	14.59	3.77	1.33	0.00	0.07	T.	27.12	1916	28.09
1916-17..	0.03	0.29	1.20	0.52	1.50	4.79	1.83	3.81	1.42	0.33	0.06	T.	15.78	1917	9.00
1917-18..	T.	T.	0.02	0.00	0.81	0.72	.....	.....	.....	.....	.....	.....	.....	.....	.....
Means ..	0.02	0.02	0.31	0.91	2.51	5.24	5.08	3.56	3.24	1.56	0.77	0.15	22.74	.....	22.50



# TEMPERATURES.

Year.	Absolute Maximum.	Date.	Absolute Minimum.	Date.
1871.....	84	October	---	.....
1872.....	92	June	41	December
1873.....	79	October	40	February
1874.....	89	September	39	January
1875.....	82	September	39	Jan. and Dec.
1876.....	93	June	36	January
1877.....	92	June and Sept.	42	Jan. and Dec.
1878.....	78	May, Sept., Oct.	39	January
1879.....	89	August	34	December 24
1880.....	84	May	37	January
1881.....	83	July	40	March
1882.....	83	September	34	December
1883.....	95	June	35	February
1884.....	83	July	35	February
1885.....	87	September	43	January
1886.....	94	September	41	Jan. Feb. Mar.
1887.....	97	May	33	February
1888.....	93	July	29	January 15
1889.....	89	September	39	February
1890.....	86	October	36	Jan. and Feb.
1891.....	100	June 29	37	December 25
1892.....	92	August	38	December 10
1893.....	90	June 3	36	January
1894.....	94	September	36	January
1895.....	89	May and Sept.	38	January
1896.....	91	May	33	March
1897.....	92	September 16	38	February 20
1898.....	89	June 4	36	January 25
1899.....	94	October 8	34	February 4
1900.....	92	September 22	40	December 31
1901.....	91	October 12	37	January 1
1902.....	83	September 29	38	January 14
1903.....	96	June 6	37	January 15 †
1904.....	101	September 8	38	December 20
1905.....	98	July 7	39	December 31
1906.....	85	October 27	40	November 29 †
1907.....	90	October 4	36	January 13
1908.....	89	September 29	35	December 20
1909.....	94	June 23	38	January 12 †
1910.....	90	May 30	36	January 3
1911.....	87	October 16	38	February 27
1912.....	94	September 18	40	January 3
1913.....	101	September 16	33	January 6
1914.....	92	September 10	41	December 15
1915.....	86	August 28	36	December 30
1916.....	87	September 27	37	January 27
1917.....	96	October 3	34	January 16

† Also on other dates.